

SYSTEM AND METHOD FOR ADJUSTABLE DISCONNECTION SENSITIVITY
FOR DISCONNECTION AND OCCLUSION DETECTION
IN A PATIENT VENTILATOR

ABSTRACT OF THE DISCLOSURE

5 The system and method for detecting disconnection and occlusion of a
tubing system of a patient ventilator detects disconnection of the tubing system, opens the
exhalation valve, delivers an idle flow of breathing gas to the tubing system, disables
breath triggering, and generates an alarm. A reconnection of the tubing system can also
10 be detected, to initiate resumption of pressure supported inspiration. For occlusion
detection, the pressure drop in the tubing system is determined by pressure sensors in the
inspiratory and expiratory airways of the tubing system. The two pressure drop values are
compared, and once occlusion is detected, an alarm is generated, and the ventilator
responds to protect the patient from over distension. Abatement of the occlusion can also
be monitored in a pressure based occlusion status cycling mode, and the ventilator can
revert back to normal ventilation when either circuit occlusion or exhaust port occlusion
are not detected.